

Memo to: Oaktree Clients
From: Howard Marks
Re: Time for Thinking

In the early weeks and months of the novel coronavirus pandemic and the related shutdown of the economy, the pace of economic and health developments was frenetic. My memo writing followed suit: one a week for the first six weeks, and a total of ten over 18 weeks. After starting off at that rapid clip, I haven't issued a memo in more than a month – which might seem like a long interval until you realize the norm in recent years has been only one per quarter.

The pace of events has certainly slowed over the last month or two, to the point where most of us are struck by the sameness of our days. We stay in one place for both work and leisure; weekdays aren't very different from weekends; and the idea of vacation seems almost irrelevant: where would we go and what would we do? My acronym of choice is SSDD, the family-friendly translation of which is "same stuff, different day."

But the slower pace of developments allows for more rumination, and I've come up with some thoughts about our present circumstances.

The Health Crisis

Earlier this month, I prepared a presentation for one of our sovereign-wealth-fund clients. Their annual forum had been expected to entail the last bit of foreign travel still on my calendar, but of course I participated by video conference instead. I started my PowerPoint presentation with the following metaphor:

To deal with particularly serious diseases, doctors sometimes have to take extreme action to save the patient: they induce a coma to permit the administration of harsh remedies, maintain life support, treat the disease, and bring the patient back to consciousness.

In the case of Covid-19, one of the worst pandemics of the last century, policymakers were similarly required to take desperate measures. Upon the eruption of the disease, epidemiologists told us it would spread exponentially, possibly killing millions.

In the absence of a vaccine, the only way to deal with the outbreak was to prevent those who had contracted the disease from spreading it to others. In order to do so, the authorities decided it was necessary to put the patient into a coma. Thus the economy was shut down to minimize interpersonal contact. Stores, restaurants, schools, places of worship, and entertainment and sports venues were ordered closed, travel was restricted, and people were told to work from home whenever possible. As we all know, the U.S. economy was largely frozen, causing 54 million Americans to file for unemployment benefits since March 21 and second-quarter GDP to shrink by an annualized 32.9%, three times the greatest quarterly decline in the 70 years of recorded quarterly history. (Please see

the end of this memo for postscript in which I discuss the significance of that reported 32.9% decline.)

The comatose patient – the economy – required life-support, and the Fed and Treasury supplied it. They rushed in with trillions of dollars to keep the patient alive: payments to individuals and households; grants to distressed industries; general business loans and tax relief; loans to small businesses; aid to states, hospitals and veterans' care; and guarantees for money market funds and commercial paper. These are sometimes described as stimulus programs, but that's a misnomer: they were support payments designed to replace cash that normally would have circulated throughout the economy.

With the economy comatose and on life support, elected officials proceeded to administer the cure. In the absence of a vaccine, this was designed to take the form of testing to identify those who had the disease and tracing to identify those with whom they'd come into contact; quarantining and social distancing to keep them separate from others; and masking to prevent the asymptomatic sick from infecting the healthy.

When the number of new cases, hospitalizations and deaths declined, and in view of the desirability of allowing economic activity to resume, those in charge turned to resuscitating the patient. The economy began to reopen in May, supported by a near-zero base interest rate and the Fed's provision of abundant liquidity, and the initial response was positive. Retail sales moved up 17.7% in May (after a 22.3% decline in March/April), and the unemployment rate fell to 11.1% in June, from a peak suspected to have been near 20%. Case closed.

Failure to Fix It

If only it was that simple. Unfortunately, in some instances the reopening took place before the number of new cases had declined enough for the spread of Covid-19 to be brought under control, and people in areas that had been spared in the early days acted cavalierly, allowing the disease to regain a foothold in their regions. Borrowing from Churchill (who probably borrowed it from Machiavelli), people who regulate economies and manage businesses say "never let a good crisis go to waste." **But in the case of Covid-19, the U.S. did just that.**

The nations of Asia and Europe had the earliest outbreaks, but they took swift and stern action – some say Draconian – including enforcing isolation and fining violators. But they got the disease under control. Unfortunately, a number of elements combined to weaken the actions taken in the U.S. and permit a resurgence of the disease:

- The absence of uniform national policies on shutdowns, social distancing, masking and re-opening.
- Inadequate support for the recommendations of health professionals and scientists.
- The foolhardiness of youth, who were misled by early statistics into believing they were immune.
- "National hubris and belief in American exceptionalism," according to Martha L. Lincoln, a medical anthropologist and historian. As one of our elected leaders stated on March 11, "The virus will not have a chance against us."

- The turning of masking and social distancing into partisan issues, raising suspicion that the virus is a hoax and protective rules an infringement of personal freedom.
- The politicization of the difficult choice between reopening the economy and minimizing infections. The states currently seeing the greatest increases in new cases are mostly ones that emphasized the former over the latter.

Clearly, society reopened and people began to congregate before the virus was reduced to controllable levels, allowing it to reemerge. And shutting down to fight the disease in some locations but not others was dangerous when people can travel freely among them. Now contact tracing – a very important weapon in the arsenal of the countries that got the spread of Covid-19 under control – is said to have been rendered useless in the U.S. by the sheer number of people who’ve been infected.

So rather than the desired progression of infection, coma, life support, treatment, cure and resuscitation, we’ve had a progression of infection, coma, life support, treatment and resuscitation. **The cure is missing.** Because much of America reopened before the disease was brought fully under control, the early lockdowns went to waste, and the current number of daily new cases far exceeds that of March and April. RockCreek Group’s July 27 report put it well:

By reopening when COVID-19 was still spreading and pervasive in many places, the US may have gotten the worst of both worlds: a sharp recession, which will leave scars in terms of business closures, bankruptcies and disrupted lives, and continued disease, that will be difficult if not impossible to eradicate, in the absence of effective treatments and vaccines.

Thus, on July 30, *The New York Times* reported as follows:

“The path forward for the economy is extraordinarily uncertain and will depend in large part on our success in keeping the virus in check,” [Fed Chairman Jerome] Powell said at a news conference following the Fed’s two-day meeting, noting that **infections have surged since late June and the “pace of recovery looks like it has slowed.”**

Mr. Powell said policymakers needed more data before drawing firm conclusions about the scope of the pullback, but he noted that **debit and credit card spending were slowing and labor market indicators suggested that recent job gains might be weakening.** (Emphasis added)

Not a Cycle

Two of the questions I get most often these days are, “What kind of cycle are we in?” and “Where do we stand in it?” My main response is that the developments of the last five months are non-cyclical in nature, and thus not subject to the usual cycle analysis.

The normal cycle starts off from an economic and market low; overcomes psychological and capital market headwinds; benefits from gathering strength in the economy; witnesses corporate results that exceed expectations; is amplified by optimistic corporate decisions; is reinforced by increasingly positive investor sentiment; and thus fosters rising prices for stocks and other risk assets until they

become excessive at the top (and vice versa on the downside). **But in the current case, a moderate recovery – marked by reasonable growth, realistic expectations, an absence of corporate overexpansion and a lack of investor euphoria – was struck down by an unexpected meteor strike.**

People also ask what's different about this episode from those I've lived through in the past.

- As described above, the normal cyclical progression of ups and downs – and the normal series of events, each of which causes the next – had nothing to do with it. The current downturn didn't result from excessively optimistic business decisions or too-high growth expectations that were disappointed, but rather from an exogenous event that brought a sudden end to the expansion. Thus the factors that result in and normally characterize a cyclical recovery – most of all the recognition that negativism is excessive and stimulative measures are required to turn things around – are unlikely to do the trick this time. Since the root cause of the current problem is medical rather than economic, merely cutting interest rates and flooding the economy with liquidity may not kickstart a recovery as usual. Rather, the virus has to be brought under control.
- Additionally, there may be permanent changes to our way of life – altering things like travel, business's reliance on offices, and activities involving crowds – that affect the path of recovery.
- Something else that keeps me from thinking about the coming months as a normal recovery is that just five months after the onset of the pandemic in the U.S., and just a few months after the bottom was reached in the market and the economy, investor optimism has been restored and the prices of many assets have regained their prior highs. That's a much faster recovery than normal by historic standards, and it seems to give short shrift to the conditions that continue to challenge the economy.
- Lastly, the effects this time are highly uneven, with people of color and low-income Americans affected disproportionately, at a time of heightened sensitivity to this issue. They're more likely to have lost their jobs and less likely to have enjoyed gains in net worth from asset appreciation – not to mention their higher rates of infection and death due to the pandemic. Whites and white-collar workers and professionals, on the other hand, are more likely to have kept their jobs and to have benefited from asset price inflation through home ownership and participation in the stock market.

I'm convinced cycles will continue to occur over time, highlighted by excessive movements away from “normal” and toward extremes – both high and low – that are later followed by corrections back toward normalcy, and through it to excesses in the opposite direction. **But that's not to say that every event in the economy or markets is cyclical. The pandemic is not.**

What Shape Are We In?

Another frequent question is, “What shape will the economic recovery take?” Everyone has his or her favorite candidate: a W, an L, a U or maybe a Nike Swoosh. Of course, the one we hear the most

about is a V. While the terminology used isn't crucial, and may basically be just a matter of semantics, I find the label "V-shaped" misleading.

Of all the people who use the label "V-shaped" to describe this recovery, I don't think I've ever seen anyone define it. To me, a "V" has to satisfy two important requirements:

- First, the essential nature of the pattern has to be **down-and-up**, meaning it doesn't spend much time skating along the bottom. One that stays down for a while, on the other hand, would be called U-shaped or what in the 1970s we called saucer-shaped.
- Second, when I hear "V," it seems to me the two sides should be basically **symmetrical**. That is, the economy should come back at a rate similar to that at which it went down.

That second criterion makes me doubt that the current recovery will be a V. The U.S. economy deteriorated in the second quarter at the highest annualized rate in history, almost 33%, and it's certainly not going to come back at the same rate (leaving aside the fact that it takes a 49% gain to offset a 33% decline).

Most observers seem to think quarterly U.S. GDP will regain its level in the corresponding quarter in 2019 sometime between the fourth quarter of 2020 and the middle of 2021. That means it'll take at least until 2021 for annual GDP to equal or exceed 2019's. Whereas I think history will show that the decline took place over just a few months (perhaps only February, March and April), the recovery may take 8 to 14 months. And the rate of unemployment is unlikely to return to its recent low of 3.5% for years, if ever.

- The renewed spike of Covid-19 cases has caused the reopening of the U.S. economy in some areas to be delayed or reversed.
- The emergence of politics as the general election approaches decreases, in my opinion, the likelihood that future support payments will be as generous as the early rounds.
- People with the choice may not return to the office for several months, holding back both overall productivity and the recovery of businesses that exist to serve office populations.
- People who are reliant on mass transit to commute to work – or on schools to care for their kids – may be slower to return to work than they otherwise would be.
- Some industries whose business models have been affected – like airlines, resorts and entertainment – may take years to recover to their prior levels.
- Many restaurants and other small businesses may never reopen.
- With industries evolving, more being done digitally and management teams having had an opportunity to watch their companies function with fewer people, some jobs may never return.
- Finally, the pandemic has accelerated preexisting trends such as automation and the decline of brick-and-mortar retail, and thus their contribution to job losses.

Fast down and slow up: to me, that's no V. I prefer to think of it as a checkmark, like this: 

The Markets and the Fed

The U.S. stock market continues its ascent, and as measured by the S&P 500, it's just about back to where all this started: the all-time record of 3,386 attained on February 19. The market for corporate credit has been strong as well. Here's the macro situation, hopefully reduced to the bare essentials:

The positives:

- The reduction of interest rates to near zero has increased the value of investment assets and spurred a global bidding war that has raised their prices.
- The Fed has flooded the economy and the markets with liquidity and other forms of support for individuals, companies and institutions.
- The Fed and the Treasury seem willing to provide support and stimulus well into the future.

The negatives:

- The economy has suffered the greatest quarterly setback in history.
- Covid-19 still isn't under control.
- A second spike is complicating efforts to re-open the economy.

In short, titanic forces are arrayed against each other: Fed and Treasury versus disease and recession. Which will win?

No one knows about the long run, but it's clear which has come out on top so far. Lower interest rates increase the discounted present value of future cash flows and reduce the *a priori* return demanded from every investment. In layman's terms, when the fed funds rate is zero, 6% bonds look like a giveaway, so buyers bid them up until they yield less (thus I believe 97% of outstanding bonds yield less than 5% today, and 80% yield less than 1%). And Fed buying drives up the price of financial assets and puts money into sellers' hands with which they can buy other assets, further elevating prices. For all these reasons, monetary actions have come out on top so far, validating the old maxim that "you can't fight the Fed."

But what does it mean if the prices of stocks and listed credit instruments are where they are not primarily for fundamental reasons – such as current earnings and the outlook for future gains – but rather in large part because of the Fed's buying, its injection of liquidity, and the resultant low cost of capital and low demanded returns? **If high asset prices are substantially the result of tailwinds from technical factors such as these, does it mean those actions have to be continued in order for asset prices to remain high, and that if the Fed reduces its activity, those prices will fall? And that leads to the ultimate question (as Bruce Karsh seems to ask daily): can the Fed keep it up forever?** Are there any limits on its ability to create bank reserves, buy assets and expand its balance sheet? And are there limits on the Treasury's willingness to run deficits, now that it has taken this year's to \$4 trillion and shown an inclination to go well beyond that?

Since I'm out of my depth regarding the last three questions, I've again turned to my friend Randall Kroszner, Deputy Dean for Executive Programs at the University of Chicago Booth School of Business. From 2006 to 2009, Randy was a member of the Board of Governors of the U.S. Federal

Reserve System and accordingly a voting member of the Federal Open Market Committee. Here's his reply:

There is no limit on the ability of a central bank to create reserves, as long as someone is willing – or through government edicts, forced – to take them. This was true in the extreme circumstances of Weimer Germany, Brazil in the 1970s/80s, and it is true Zimbabwe today, as well as in the much more benign current situation in Japan. The key question is the impact of that reserve creation on money supply and the demand for money. Treasury's appetite for deficit financing will remain high as long as real and nominal interest rates remain low.

In the last five months, the Fed has swollen its balance sheet by \$3 trillion and the Treasury has added \$3 trillion to the expected deficit, for a total increase of liquidity in the economy of \$6 trillion, probably with more to come. It's normal to assume that an increase in liquidity on that order will increase the demand for goods relative to the supply, bringing on increased inflation, as it already has for financial assets. (Note, however, that even with interest rates low for a decade and near zero today, inflation hasn't come close to the Fed's target of 2%. If growth remains weak and inflation stays low, the Fed is likely to believe it can continue an activist regime.) Here's Randy Kroszner's view:

I think this is the key point: whether it is Japan, where the BoJ's balance sheet exceeds 100 percent of GDP and continues to grow rapidly, or the ECB with a balance sheet of more than 50 percent of Eurozone GDP and growing, or the Fed with a balance sheet of just over a third of US GDP and growing, inflation has been below the 2 percent target, and expectations of inflation over short and long horizons remain low. Even when the U.S. was growing 2-3 percent pre-Covid, we didn't see an uptick in inflation or inflation expectations. As long as there continues to be a very large demand for super liquid safe assets like bank reserves and cash, the central banks can maintain large balance sheets – and even increase them – without a sharp increase in money supply that ignites inflation. The ongoing uncertainty over the course of the virus and the policy responses will undoubtedly keep the demand for safe liquid assets high for some time.

It's also normal to assume that monetary expansion like this can lead to a weaker dollar, downgrades of the U.S.'s creditworthiness by rating agencies, higher interest costs on national debt, and/or jeopardy to the dollar's status as the world's reserve currency. All these things could increase the difficulty of servicing the U.S.'s expanded national debt, feeding back into still-higher deficits. **This isn't pie-in-the-sky, since between March (when the Fed/Treasury programs were announced) and the end of July, the dollar depreciated by 9% versus a basket of currencies.** That could be related to the dollar's tendency to benefit from flight to quality, which probably reached its apex in March, and to do less well when fear recedes. But it's still down 3% for the year to date and particularly weak in July.

These are the traditional concerns with regard to monetary expansion. Modern Monetary Theory (“MMT”) stands ready to refute them. The actual outcome is unknowable. **But does it really make sense that bank reserves, the Fed balance sheet and the federal deficit can be increased *ad infinitum* without negative effects?** My answer is the usual: we'll see. But I'll let Randy Kroszner have the last word on the subject:

I always find it difficult to understand MMT – it seems to suggest that there isn't a budget constraint. I'm very old-fashioned about that and still believe in them. Countries like Argentina, Zimbabwe, etc. show that the less "modern" monetary theory still applies, at least in those places. **There is a delicate balancing act: Markets certainly allow credible governments like Japan and the US to borrow enormous amounts without much concern, but the key issue is what could undermine that credibility? If that does happen, the consequences certainly could be titanic.** (Emphasis added)

The Bull Case

One thing the pandemic has given many of us is lots of time for reading and thinking, and I've had a chance to bone up on some of the arguments supporting current stock and bond market prices. Given my "value" leanings and acknowledged conservative bias, I found it a valuable process. And it was important to undertake it, since it certainly can't be said that caution regarding the damaged economy and elevated p/e ratios has been rewarded of late.

As for the stock market, several points are advanced to justify the current level – which is so mystifying to value investors – and assert its bright future:

The first is that many investors have underestimated the impact of low rates on valuations. In short, what should the stock market yield? Not its dividend yield, but its earnings yield: the ratio of earnings to price (that is, p/e inverted). Simplistically, when Treasuries yield less than 1% and you add in the traditional equity premium, perhaps the earnings yield should be 4%. That yield of 4/100 suggests a p/e ratio (the inverse) of 100/4, or 25. Thus the S&P 500 shouldn't trade at its traditional 16 times earnings, but roughly 50% higher.

Even that, it's said, understates the case, because it ignores the fact that companies' earnings grow, while bond interest doesn't. Thus the demanded return on stocks shouldn't be (bond yield + equity premium) as suggested above, but rather (bond yield + equity premium - growth). If the earnings on the S&P 500 will grow to eternity at 2% per year, for example, the right earnings yield isn't 4%, but 2% (for a p/e ratio of 50). And, mathematically, for a company whose growth rate exceeds the sum of the bond yield and the equity premium, the right p/e ratio is infinity. **On that basis, stocks may have a long way to go.**

The rest of the bulls' arguments mostly surround the exceptional nature of the market-leading tech companies:

- They grow much faster than the large companies of the past, and their growth is much less likely to prove cyclical.
- In fact, the current crisis, with the accompanying movement on-line of a larger share of everyday life, has (a) served to accelerate their growth or (b) given them an opportunity to demonstrate their ability to grow regardless of conditions in the environment.
- They have scale, technological advantages and network effects that give them much greater protection against competition than their old-economy predecessors enjoyed.

(Correspondingly, however, regulatory efforts to restrain their market power represent their greatest risk.)

- Thanks to the role of intellectual property as the main “raw material” in their products, most of these companies can create additional units for sale at very low marginal cost.
- Likewise, they can grow without much additional capital, if any (all five of the top tech firms are in a “net cash” position, meaning their cash holdings exceed their debt).
- Finally, their high p/e ratios today mean less than usual, since these tech champions are vastly under-reporting earnings: if they were to cut back on things like customer-acquisition costs and R&D and settle for lower (but still rapid) growth, they could report far higher earnings.

Thus, it’s said, the skeptics seriously underestimate the ability of the technological leaders to grow, and to pull up the overall growth rate for the universe of common stocks. They grow every day, and so does their representation in the equity indices and in corporate America, creating a virtuous circle.

Thus, with these dominant large-cap tech companies making up a large and growing percentage of the stock market, to be bearish one has to have a thesis on why they should fall. Or else you would have to bet on the non-tech sectors to decline a great deal and pull down the averages – despite the fact that they’re already down a lot.

The S&P 500 is basically flat on the year, but without FAAMG (Facebook, Apple, Amazon, Microsoft and Google, its five heaviest-weighted components) and other tech/software stocks, it would be considerably lower. (The top five are up by an average of 36% so far this year, while the median change for all 500 stocks is minus 11%.) Does it make sense that the FAAMG-plus-tech/software stocks are up a lot in this context? It seems that it does, because (a) Covid-19 has accelerated tech adoption in many ways, and thus these companies’ growth, and (b) today’s ultra-low interest rates justify much higher p/e ratios (see above). If instead the tech giants were flat against this backdrop – or had just performed in line with the rest of the index – we’d probably say something was wrong.

I don’t know whether these bullish arguments are absolutely correct or merely have gained luster thanks to their having driven the 46% gain of the S&P 500 over the last four months.

Regardless, I want to share the bull case as a public service and because it has obvious merit . . . and certainly has won out thus far.

* * *

So let’s try to find a bottom line:

- **On one hand, we have the surprisingly rapid recovery of the stock and credit markets to roughly their all-time highs**, despite the fact that the spread of Covid-19 hasn’t been halted, and that it will take a good number of months for the economy to merely return to its 2019 level (and even longer for it to give rise to the earnings that were anticipated at the time those market highs were first reached). Thus p/e ratios are unusually high today and debt yields are

at unprecedented lows. Extreme valuations like these are usually justified with protests that “this time it’s different,” four words that tend to get investors into trouble.

- **On the other hand, John Templeton allowed that when people say things are different, 20% of the time they’re right.** And in a memo on this subject in June of last year, I wrote, “in areas like technology and digital business models, I’d bet things will be different more than the 20% of the time Templeton cited.” It certainly can be argued that the tech champions of today are smarter and stronger and enjoy bigger leads than the big companies of the past, and that they have created virtuous circles for themselves that will bring rapid growth for decades, justifying valuations well above past norms. Today’s ultra-low interest rates further justify unusually high valuations, and they’re unlikely to rise anytime soon.
- **But on the third hand, even the best companies’ stocks can become overpriced,** and in fact they’re often the stocks most likely to do so. When I first entered the business in 1968, the companies of the Nifty Fifty – deploying modern wonders like computing (IBM) and dry copying (Xerox) – were likewise expected to outgrow the rest and prove impervious to competition and economic cycles, and thus were awarded unprecedented multiples. In the next five years, their stockholders lost almost all their money.

For these reasons and more, I find today’s stock and credit markets opaque . . . as usual.

We reach our conclusions, limited by the inadequacy of our foresight and influenced by our optimistic or pessimistic biases. And we learn from experience how hard it is to get the answer right. That leads me to end with a great bit of wisdom from Charlie Munger concerning the process of unlocking the mysteries of the markets: “It’s not supposed to be easy. Anyone who finds it easy is stupid.”

August 5, 2020

P.s.: We were all struck by the enormity of the reported decline in second quarter real GDP. **Before now, no one’s ever seen an economy contract by one-third in three months!** However, thinking about the results in connection with writing this memo raised some questions:

- I had immediately assumed Q2 GDP was down \$1.81 trillion, or 32.9%, from Q2 of last year. But the actual decline was only \$0.45T, from \$4.76T to \$4.31T, or 9.5%.
- Could it have been a decline of \$1.81T from Q1’s \$4.63T, bringing Q2 GDP to \$2.82T? But going from \$4.63T to \$2.82T would mean a decline of 39.1%. And anyway, that couldn’t have been the case, since actual Q2 GDP was \$4.31T.
- Or was it a projected drop of \$1.81T from actual 2019 full-year GDP of \$19.09T? No, that would represent a decline of only 9.5%.

I couldn’t make sense of the numbers, so I consulted Conrad DeQuadros of Brean Capital for help understanding them. I found his answer surprising, and you might as well.

Have you thought about what the reported 32.9% decline in second quarter GDP really means? Answer: **it's the percentage by which 1Q2021 GDP would be below 1Q2020 GDP if GDP were to decline in the next three quarters at the same rate as it did in 2Q2020.** If that seems incredibly complex, so was Conrad's explanation:

- Actual second quarter real GDP (without seasonal adjustment or annualization) was \$4.31 trillion. That was down 7.0% from \$4.63T in Q1 on the same basis.
- If the three subsequent quarters were also down 7.0% from quarter to quarter, 3Q2020 would be \$4.00T, 4Q2020 would be \$3.72T, and 1Q2021 would be \$3.46T. (These are figures you'd never see, since they omit seasonal adjustment, annualization and adjustment for inflation. But I think they present a fair if not technically correct picture for these purposes.)
- **It's that figure of \$3.46T for 1Q2021 GDP that – after annualization and adjustments for seasonality and inflation – would be 32.9% below GDP in 1Q2020.**
- Interestingly, after the assumed declines, GDP in the four quarters 2Q2020 through 1Q2021 (as enumerated above) would sum to \$15.49T for the year. But that would be down only 18.9% from the actual total of \$19.11T in the four prior quarters (2Q2019 through 1Q2020).

So, again, the 32.9% reported decline in Q2 is the difference between 1Q2020 GDP and projected 1Q2021 GDP assuming quarterly GDP continues to fall at the 2Q2020 rate. But nobody expects that to happen. Which means the 32.9% is a highly misleading, exaggerated figure. **Nothing went down by one-third, and nothing is likely to do so.**

It's the same for nominal GDP. The decline in GDP from 1Q2020 to 2Q2020 was reported as \$2.15T, or 34.3%, but those also are annualized figures. The \$2.15T decline is the difference between 1Q2020 annualized GDP of \$21.56T and 2Q2020 annualized GDP of \$19.41T. But the decline in actual quarterly nominal GDP from Q1 to Q2 was only \$0.38T (from \$5.25T to \$4.87T), or 7.2%. So what do the reported annualized Q2 declines of \$2.15T and 34.3% mean? Also nothing.

In the business world, we'd be looking at the relationship between GDP in 2Q2020 and what it was in 2Q2019. As mentioned above, real Q2 GDP fell from \$4.76T in 2019 to \$4.31T in 2020, for a decline of 9.5%. Nominal Q2 GDP fell from \$5.36T in 2019 to \$4.87T in 2020, down 9.1%. **Obviously, neither of these year-over-year declines bears any resemblance to the reported 32.9% decline.**

Here's Conrad's conclusion:

Annualization is useful in normal times for comparing a quarter to the recent prior years, but not very useful for current circumstances. . . . Most other major economies do not report annualized changes in GDP (for example, when the change in Eurozone GDP is reported [on August 3], it will be a non-annualized change). It is not reasonable to expect the second quarter's drop to continue for a year.

Finally, at year-end, the GDP that's reported for each year is the sum of the actual dollar GDP in its four quarters (without annualization or seasonal adjustment). **Thus, when GDP is reported for 2020, it's unlikely to show a decline of 32.9% or anything like it.** After reported quarter-over-quarter declines in annualized GDP of 5.0% in Q1 and 32.9% in Q2, Morgan Stanley (for example) expects increases of 21.3% in Q3 and 0.3% in Q4. If we were to chain those quarterly percentage changes, as we do with quarterly portfolio returns, we

would get a decline for the year of 22.5%. Or if we (incorrectly) added them together, ignoring the impact of compounding, we would get a decline of 16.3%. **But MS expects full-year 2020 GDP to be down only 5.3% year-over-year and 6.2% Q4-over-Q4.**

So what I've learned is that annualized quarter-over-quarter changes are quite meaningless, **including Q2's reported decline of 32.9%.**

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